1814.

#16

On inflammation —

In making choice of this subject. (viz in=
=flammation) it is not under an impression
that I will add a single new fact or theory
to what has been already written on this obscure
but interesting subject. But with a view to
fulfil one of the laws of this University and
to become more acquainted and familiar
with the nature and treatment of this subject
as being so intimately connected with the
practice of Surgery I intended to have
written an experimental piece when I
determined on writing, but from the necessity
of attending to my duty as an assistant
Surgeon in a Navy Hospital and to such a
number of lectures. I found it impracticable
In writing on this subject I will be obliged
to give some theory but my chief object
will be the practical and more useful part
I will here make a few remarks on the
importance and necessity of attending par=
=ticularly to this part of Surgical practice
What I ask will more certainly crown the
neat and skilful operator with success than
a knowledge of this kind? without which that

confidence and firmness requisite for such operations, will to his mortification sooner or later forsake him. Who in a majority of important cases in Surgery can hope or reasonably expect to conduct his patients to a happy and successful issue unless he be acquainted with inflammation, and if he be unsuccess=ful from this cause all his boasted and probably well founded claim to adroitness in operating will terminate in disappointment and chagrin. but if he be in possession of this requi=site information, if he be not able to prevent, which is always best, he will generally be able to extricate himself from the subsequent difficulties which may occur and by that means conduct the sufferer safely thro' with honor & credit to himself. And as Surgery is so closely connected with the subject under discussion I think this ought to be a sufficient incence=ment for those who expect to be engaged in this kind of practice - to be prepared to combat one of its most usual & frequently formidable com=itants, which so often endangers the life of the patient & jeoparcizes the skill and

reputation of the operator. This period too of our national existence demands of us much attention to this important subject, as being so closely concern=ed in the many accidents to which our soldiers are daily and hourly exposed and also our Sailors whose labors and exertions are so imperiously de=manded and peculiarly advantageous at this trying time. I think they lie fair to be our chief national safeguards - and under this im=pression I hope those who are engaged in the Navy as Surgeons will not omit any thing which will add to their comfort & longevity. I am well convinced this part of surgical practice requires more of the profound and mas=terly operations of the mind. than the mere ope=ration itself in at least three out of four important cases. A man who would willingly and deliberately undertake an important Surgical operation without reasons. superior to prejudice or interest, for supposing himself qualified to encounter the subsequent symptoms, would be very little better than a murderer. Yet I believe cases may occur in which it would not only be just - but even a favor. for temerity

and ignorance to step forward and by such operations make an attempt to rescue the sufferer from threatening destruction, but no man in his honest and feeling senses will pretend to advocate these rare cases originating out of direful necessity as a precedent for general practice those who trust exclusively to the power of the system in preventing and curing disease when formed will no doubt be often foiled in their hopes and expectations. While those again who think art sufficient to combat and conquer disease under all its forms will not only be disappointed but even injurious. However I think less so than if he gave the cure up to nature altho, no branch of medical science can boast of more proofs in favor of the vis medicatrix apparently. than surgery and would even appear to sanction a belief in an intelligent principle, for what other name can we give to it. than intelligence when after a fracture as in the patella it produces ligament instead of bone when according to the natural order of things we ought to have bone. but where bone would be incompatible with the function of the part

But if this were admitted I think it would prove too much I consider all those boasted proofs in favor of the vis medicatrix as much the effect of stimuli acting on excitability, as ~~[illegible]~~ contraction the effect of muscular power or vision the effect of light acting on the healthy eye and in no part of the healing art is medical aid more requisite in preventing disease and regulating and curing it when present than in the practice of Surgery and particularly that part of it denominated inflammation. In my mind both extremes as it respects the efficacy and inutility of nature in curing diseases are fallacious and injurious in practice, but a strict attention to the human system and the different changes it undergoes, from the variety of causes acting on it will I think constitute the best practical guide not only in this but in every form of diseased action. and that these things must be kept in view to prescribe either scientifically or successfully -

I have no hesitation in thinking and asserting too that the theory and practice of inflammation as taught in this University is the most

rational simple and intelligible. That are now or have been taught in any medical School whatever, but to say we will never have more correct ideas of its nature and treatment would be derogatory to that state of improvement which has so indelibly stamped the character of this University over all others of its day and which now marks its progress in the science of medicine. The present simple and accurate fabric of Surgery has doubtless been furnished with a very large portion of its materials from the scrutinizing & original mind of the present professor of Surgery, by him Surgery has been rationally stripped of much superfluity and humanely robbed of the largest share of its cruelty & torture for which the present ~~generation~~ and future generations ought and I hope will feel that warm and liberal share of gratitude which becomes the human character —

I shall now proceed to define and divide my subject. By inflammation I mean that state of a part in which there is more redness, tumefaction, pain & heat than natural in a healthy state of things.

This division may be very properly divided into
1st its causes. 2d its symtoms and 3d its termination and
4th its treatment. In speaking of inflamma
=tion I shall confine my observations entirely
to what has been called healthy, not depending
on either depravity or peculiarity of constitution
In treating of this form of disease I shall hum=
=bly a voice entering into an investigation
of the opinions and practice of the ancients
which were to say the least of them very correct
in many instances both as to the nature and
cure ~~of~~ my object will be to pursue the plan
which I deem most correct and useful
1st Of the causes of inflammation. Whatever destroys
a due proportion between the power and action
of a heart either by its force or duration will
in a majority of cases be productive of inflam
=mation, but varied in degree by the force or
duration of the causes. which commonly pro
=duce this effect. The causes from action divide
themselves into those which stimulate as heat and
the rubifacients generally and into those which
act mechanically as wounds, bruises, &c &c
Those which produce inflammation by abstraction

are cold and constriction, to such a degree as to prevent the circulation of fluids thro' parts which depend on them for their vitality and nourishment I shall not undertake an explanation of the modus operandi of each remote and exciting cause of inflammation, because I think this neither very profitable or practicable, and therefore I leave this mysterious and herculean task and only add that I consider the human body as one chain or circle made up of many links and to treat this as well as every other form and grade of disease with a tolerable chance of success, we must attend to the nature of the body acted on, the nature of the cause acting with an attention to the violence and duration of the power acting, and the different grades of action produced in this process, and then to be regulated by the state of the system in prescribing for inflammations, whether partial or general After these few short and I think correct remarks on this subject I will next take notice of the symptoms usually ~~attendant~~ attendant on inflammation and what I suppose to be their most probable cause. Redness is the first symptom to be considered. This arises

to depend on two causes 1st on an increased action in the vessels of the part which circulate red blood. and 2. on an increased size in those vessels which in a natural state transmit lymph but in this excited state permit red blood to pass thro' them, constituting what is called an error loci of the blood. I infer that an increased and not a diminished action of the part exists from the nature and well known effects of the remedies which are used with ~~such~~ such prompt and decided advantage in the first stages of inflammation, such as bleeding locally or generally, rest, favored by posture, which last mode I consider a species of direct revulsion and of great importance and efficacy in facilitating the cure of inflammation when located in the extremities and often times the only kind of revulsion we are warrantable in ~~the~~ using. The second symptom is tumefaction this appears to be produced by a deposition of coagulable lymph and sometimes serum. together with an enlargement ~~of~~ of the vessels in the part diseased

the nervous system is liable. We have seen a reality explained by different writers, some make it to depend on a morbid state of the nerves or an idiopathic symptom, while others contend that it depends on tumefaction or a symptomatic symptom that tumefaction may increase or aggravate such a symptom I am not disposed to deny altogether, but that I do not believe this to be the true cause, on the following reasons. We often see pain of a very acute and distressing kind without the least swelling as in Tic Douloureux and on the other hand we often find much swelling without pain as in many of the sarcomatous and steatomatous tumors and lastly, the pain and tumefaction in many instances do not bear the proper relative proportions to each other I think it is a morbid state of the nerves or rather the result of the same morbid action which induces the redness & tumefaction and not a symptom of a symptom which originates rather as a constitution than a well founded cause — I consider as the abstraction of blood or

and disease and health depend on due proportion of power and action and consequently whatever destroys this due proportion will I think produce in some degree pain, which however, will depend on the violence and force of the causes producing the disease action called inflammation, this morbid action is what I suppose to be the true cause of pain and what I believe is analogous to what is denominated a morbid state of the nervous system made mention of by some writers. The fourth symptom generally ~~take~~ taken notice of is heat and till Hunters time this was universally admitted but from some experiments made by this rare man, the fact so long taken for granted, is quite problematical with me, altho I was decidedly with the multitude. till I carefully perused his experiments made to test the truth or falsehood of this opinion and on this point I say in very reasonable grounds I will not attempt an explanation of its mere operation. The foundation ought always to be well laid previous to the raising of the superstructure

I will now take into consideration the ter=
=mination and treatment of ~~inflamation~~
inflammation under four different stages
which are generally distinctly marked. But it
is not always the case that these four
grades succeed each other in the order
I shall speak of them
I shall for convenience divide them into
the following order. 1st Adhesion 2dly Resolution
3dly Suppuration and 4thly Gangrene
Adhesion. This appears to be the most sim=
=ple and useful form of disease and one
of the principle and most powerful auxil=
=iary furnished by Nature to the art of
Surgery. This process has for its object the
reproduction of parts when destroyed as in
contused wounds and large abscesses or
the reunion of parts when ~~separated~~ dissevered as in
lacerated wounds of the Scalp and simple
incised wounds of different parts and
these two apparently different functions
are effected by the same agent viz coag=
=ulable lymph, which after it is thrown out
acts on the form of bone tendon or muscle

as the necessity of the case requires. Nature however frequently does too little or too much and here the hand of art is requisite to regulate her. It is very evident that this coagulable lymph must undergo some change to fit it for this important purpose. but what this is I believe none are able to tell but this very obscure and intricate cause, has been explained by supposing that it undergoes a peculiar change. This I conceive to be no explanation atall but merely the assertion of a fact, and fortunately for us the true nature of this as well as many changes which take place, is not essential to the treatment of this and many other forms of disease with success, by attending to the state of the system or part and learn if practicable whether there be too much or too little action and to prescribe our remedies accordingly, I believe we will generally practice correctly. The remedies for too much action are local and general as the necessity of the case may demand. local remedies are however of themselves sufficient for the management most cases of this grade, they should be resp

leeches. rest and posture when practicable combined with lugorific mixtures frequently applied to the part, if these will not answer a blister is next to be laid over the part. and this will generally answer, but should this with the others prove ineffectual. we must then attempt to relieve the part at the expence of the whole system, by bleeding purging and low diet, using at the same time the local remedies particularly the blister which I consider an ipse agmen in local inflammation. I will just observe that purging ought not to be neglected while using the local means. should the symptoms be either mild or violent unless the motion given by such medicines in their operation would by irritating the part affected be more injurious than such medicines would be useful On the other hand when the action is too weak for the reproduction ~~and~~ or reunion of parts our plan of treatment must be vice versa, with the exception of the blister which appears to possess a two-fold virtue Resolution I think will be very properly spoken of after caution as being the principal

and necessary agent in removing the superfluous matter which is frequently left after the process of adhesion is over. The mere stimulus of this matter is often sufficient to excite the absorbents to this salutary office. Without the interference of art, the process of resolution is performed for the most part by the power and agency of the absorbents. This like adhesion may suffer the same irregularities. Sometimes this stage transcends the bounds of resolution and threatens disorganization or suppuration here we must have recourse not only to the local but general remedies as blistering bleeding purging rest and posture just as in adhesion when in a similar state and which has been already spoken of — when the absorbents are too feeble we must excite them to action by stimulating applications and here again the blister claims a two fold virtue —

Resolution is sometimes produced by a hemorrhage from the part. The modus operandi of this evidently depends on a direct depletion or emptying the blood vessels of the part, a secretion of urum appears to answer the same

mor and this I think is effected by ~~relieving~~ relieving the parts of that tension which is always unfavorable to resolution where the action is too great. posture in ~~the~~ all stages of high action must not be neglected when there is hope of its being useful, it appears to do good in this stage of inflammation by lessening the ~~mo~~ momentum and consequently the quantity of blood which circulate thro' the part in a given space of time and by thus keeping under the circulation we will have the absorbents in a more active state when we wish to effect our object thro' their agency. But notwithstanding, all these means will sometimes prove unavailing, and the symptoms of suppuration become more and more obvious and inevitable, altho the assistance of the neighboring parts is attempted by that important and wonderful law of the animal oeconomy denominated sympathy. yet they must succumb a victim to a raging tyrant — we may generally be certain that suppuration will take place from an aggravation of all the symptoms of inflammation connected

a patient member of a region. to see there cir-
cumstances to persist in the use of those remedies
which had for their object resolution would be
both cruel and unreasonable. When we know
that this third stage of inflammation has
actually taken place and the following symp-
toms will generally be sufficient to decide us in
our diagnosis between this and any other, as
an abatement of all the symptoms above
enumerated. together with a soft full and sense
of weight and a change of color from a red
to a pallid appearance. in this situation two
modes of procedure present themselves either to
wait till the absorbents make an opening or
do the same with the caustic or lancet
in making choice of the two last mentioned
ways. we are to be governed in some measure
by the wishes of our patients. but if we
have the liberty of deciding. we should always
give the preference to the ~~caustic~~ lancet.
in waiting for the tedious but sure operation
of the absorbents. we must be regulated by
the importance of the affected or connected
parts and the effects of such collection
on the constitution

After we have determined on and made the opening our best application while there is existing inflammation and hardness will be a poultice of bread and milk the temperature of which should be regulated by the feelings of our patients. When granulations have fairly begun and the purulent discharge begins to diminish a little, then our best applications will be lint and simple cerate together with bandages and adhesive plaster I will notice in the last place those terminations denominated gangrene and mortification or the dying and death of a part. This like every other form of disease, may be induced by too much or too little action and I understand this as being analogous to that both on with or without previous inflammation. The precursors of a gangrenous state are a leaden color of the parts with increased pain and sensibility the two last distinguish it particularly from mortification. The state of gangrene I believe in all cases is a disease of debility whether it be brought on by excess, from action or abstraction

When the gangrene exists as a local disease while the system is pale and exhausted our plan of treatment must evidently be to stimulate locally and deplete generally and by that means we will prevent the violent action of the whole system from [illegible] the heart already too much weakened or rather to use the words of the late celebrated and ingenious Smith we must plumb the system when this is our object the remedies are too obvious to be repeated I will have to not omit to name the Colestic as a local remedy superior to all others and might more to be forgotten in our practice in such cases. When the pain and tenderness state of debilitation exists more as a general affection we must of course have recourse to such remedies as will act on the whole system as well as local stimulants such as tone back and most of the class of stimulants. Together with gave rise —
indication, to is generally known by an intense lack of sensation a very tender skin a cold back & nature and an elevation of the pulse in arteries. The causes such diseases are the other forms of

inflammation will produce mortification only to be varied in force or duration; from that which induced the other forms. Our plan of treatment in mortification is to attend to the state of the system and prescribe accordingly in order to arrest the farther progress of this ~~[illegible]~~ diseased action and to facilitate the sloughing of the dead portion. as this portion thus dead cannot be acted on by the application made to it, our principal business is to keep the parts in a moist and comfortable state by the use of mild poultices and prevent its becoming hard & irritating to the parts of sensibility connected with the dead portion, should it be very tedious to the patient or the attendants this may be relieved in a great measure by the charcoal poultice: and also the bark poultice I will now conclude this short and very imperfect essay by making a few remarks on the word anti-septic as generally used by medical writers. this affords a very striking proof how very prone we are to perpetuate the error of our ancestors either from to much

omission or inattention and not from ignorance. I am not willing to confess that we now use the word antiseptic from ignorance because no one will now admit of the putrid state of the living system whence the term originated and as they knew no better it was proper for them to use it for the expression of such a belief and if we will not now admit of such a cause and from very good reasons I think the term itself ought also to be improper at least as far as it respects the living human body. What is meant by antiseptics? such medicines as prevent putrefaction. As this cannot take place in the living human body it then must be such medicines as prevent death, for this is absolutely necessary before such specific medicines can be prescribed with any degree of propriety for this particular state of the living body. This now however no one will advocate. Well how do those antiseptics prevent death? by giving tone to the system when it too weak and abstracting to him if

system is too highly excited and now I ask what medicines when prescribed with a due regard to the state of the system will not produce these effects? I know of none but will directly or indirectly produce one or the other of these effects I am very certain that the cancer cure will have a powerful claim to the prevention of death as the two great heroes of the antiseptic class are. I believe would be rather to call these antiseptic remedies. As the improvement of every science depends on the use of terms appropriate and perspicuous in their meaning I think it is high time for us to reject from our science those which are not so. but on the contrary tend to obscure and entangle the truth. I grant the term may be used with some pretensions to a meaning of this kind when applied to dead animal matter but not otherwise. Back to 8½ pages